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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/084,704	02/26/2002	Gabor Devenyi	01W120	6376	
759	90 02/27/2006		EXAMINER		
Raytheon Company			HANSEN, COLBY M		
Bldg. EO/E01/E 2000 East El Se	150 gundo Boulevard		ART UNIT PAPER NUMBER		
P.O. Box 902	9		3682		
El Segundo, CA	A 90245		DATE MAILED: 02/27/2006	5	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)			
Office Action Commons	10/084,704	DEVENYI, GABOR			
Office Action Summary	Examiner	Art Unit			
	Colby Hansen	3682			
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address			
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).			
Status					
1)⊠ Responsive to communication(s) filed on <u>08 December</u>	ecember 2005				
•—	action is non-final.				
3) Since this application is in condition for allowar		secution as to the merits is			
closed in accordance with the practice under E	•				
·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Disposition of Claims					
4)⊠ Claim(s) <u>1-15 and 17-21</u> is/are pending in the	application.				
4a) Of the above claim(s) is/are withdraw	vn from consideration.				
5) Claim(s) is/are allowed.					
6)⊠ Claim(s) <u>1-15 and 17-21</u> is/are rejected.					
7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and/o	r election requirement.				
Application Papers					
9) The specification is objected to by the Examine	r.				
10) The drawing(s) filed on is/are: a) acc	epted or b) \square objected to by the \square	Examiner.			
Applicant may not request that any objection to the	drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).			
Replacement drawing sheet(s) including the correct					
11) ☐ The oath or declaration is objected to by the Ex	aminer. Note the attached Office	Action or form PTO-152.			
Priority under 35 U.S.C. § 119					
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C. § 119(a))-(d) or (f).			
1. Certified copies of the priority document	s have been received.	`			
2. Certified copies of the priority document	s have been received in Applicati	on No			
3. Copies of the certified copies of the prior	rity documents have been receive	ed in this National Stage			
application from the International Bureau	ı (PCT Rule 17.2(a)).				
* See the attached detailed Office action for a list	of the certified copies not receive	ed.			
Attachment(s)	. 🗂				
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) 🔲 Interview Summary Paper No(s)/Mail D				
 Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 		Patent Application (PTO-152)			
Paper No(s)/Mail Date	6) Other:				
					

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5-11, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan (US Pat. 6,459,844) in view of Schwanz et al (US Pat. 4,227,426).

Pan (US Pat. 6,459,844) discloses a leadscrew assembly comprising a leadscrew 24 operable to rotate about a rotational axis to linearly drive a driven structure and comprising an elongated shaft having an outer lateral surface and a rotational axis, and a linear slide mechanism18,28 to which a drive nut housing 30 is affixed so that the drive nut housing does not rotate including an optical filter supported on the linear slide mechanism, the optical filter 12 being movable by a rotation of the leadscrew.

However Pan (US Pat. 6,459,844) does not disclose the use of a hollow nut with spring pin for engaging a screw assembly or the use of helically wrapped wire.

Schwanz et al (US Pat. 4,227,426) discloses a screw assembly comprising:

A screw 1 comprising:

a cylindrical elongated shaft having an outer lateral surface and a rotational axis, and a screw thread 3;

a hollow drive nut housing 6 comprising;

a nut bore having an unthreaded inner surface with the screw being inserted through the nut bore, the nut bore being sized such that the screw may rotate therein about the rotational axis, and

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a spring pin 7 affixed to the drive nut housing and spanning across the nut bore to engage the screw thread;

the spring pin 7 has a first end, a central portion, and a second end, and wherein the first end and the second end are each affixed to the drive nut housing (at the end of slots 10);

the first spring pin retainer and the second spring pin retainer each comprise openings in the drive nut housing (at the end of slots 10);

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the hollow nut with spring pin for engaging a screw assembly and the use of helically wrapped wire between the screw and nut as taught by Schwanz et al (US Pat. 4,227,426) within the screw/nut actuated optical filter mechanism of Pan so as to have a relatively inexpensive arrangement for transferring forces between a nut and screw shaft as well as to serve as a simple overload protection between the relatively rotating screw and nut, as suggested by Schwanz et al (US Pat. 4,227,426) (col. 1/lines 44-47 & 53-58).

Claims 1, 2, 4, 12-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan (US Pat. 6,459,844) in view of Schwanz et al (US Pat. 4,227,426), as applied to claims 1, 3, 5-11, and 18-21 above, and further in view of Devenyi (US Pat. 5,636,549).

Pan in view of Schwanz et al. discloses the claimed invention except for a circular cross section thread wire helically wrapped in spaced-apart turn upon the lateral surface and affixed to

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an elongated shaft with a spacer wire having a size smaller than that of the thread wire and helically interwrapped about the elongated shaft with the thread.

Devenyi (US Pat. 5,636,549) discloses a leadscrew comprising an elongated shaft 24 having an outer lateral surface and a rotational axis, and a leadscrew thread comprising a thread wire 16 helically wrapped in spaced-apart turns upon the lateral surface and affixed to the elongated shaft; a spacer wire 17 having a size smaller than that of the thread wire and helically interwrapped about the elongated shaft with the thread wire; a thread wire that has a circular cross section (fig. 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the helical wire thread of Devenyi (US Pat. 5,636,549) within Pan (US Pat. 6,459,844) so as to form a hard, smooth thread comprising a wear-resistant running surface for engagement with a bearing nut member as suggested by Devenyi (US Pat. 5,636,549).

Response to Arguments

Applicant's arguments (and amendment), filed 12/8/2005 with respect to 35 USC 112, 2nd paragraph rejection of claim 21 have been fully considered and are persuasive. The aforementioned rejection of claim 21 has been withdrawn.

Applicant's arguments with respect to the 35 USC 102 rejection (as being anticipated by Swanz) of claims 1, 3, 5, 8-9, and 18-19 have been considered but are most in view of the new ground(s) of rejection.

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Applicant's arguments with respect to the 35 USC 103 rejection (over Swanz) of claims 6 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments with respect to the 35 USC 103 rejection (over Swanz view of Devenyi) of claims 2 and 4 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that Swanz is nonanalogous art (as it applies to the 35 USC 103 rejection of Pan in view of Swanz, further in view of Deveny), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Swanz is clearly in the field of endeavor as it relates to a screw/nut interaction. Whether it is used in the context of a linear actuated screw or a linear actuated nut, the microcosm that is the direct mechanical relationship between the screw and nut is relevant, and therefor applicable within the 35 USC 103 rejections.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case, there clearly is motivation to combination Pan and Swanz in order to have a relatively inexpensive arrangement for transferring forces between

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a nut and screw shaft as well as to serve as a simple overload protection between the relatively rotating screw and nut as suggested by Schwanz et al (US Pat. 4,227,426) (col. 1/lines 44-47 & 53-58).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MEP. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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(Signature)

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (571) 272-7105. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley, can be reached on (571) 272-6917. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen

Patent Examiner

2/21/06

RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER